

DEPARTMENT OF TRANSPORTATION



QUESTIONNAIRE

REGARDING TRANSITIONING FROM THE CURRENT

TITLE-21 PROTOCOL TO A NEW PROTOCOL

PAGE 1

The California Department of Transportation (Caltrans) is currently considering the development of regulations regarding new technologies and new technical specifications to replace the current automated vehicle identification protocol currently set out in the California Code of Regulations (commonly referred to as the "Title-21 protocol"). Caltrans is very interested in hearing from stakeholders as to their views on the transitioning from Title-21 protocol to a new protocol, most likely the 6C protocol.

Caltrans will be holding two public workshops (July 8, 2015 in Oakland and July 22, 2015 in Fontana) to solicit initial comments on the transition from the current Title-21 protocol.

However, in anticipation and in connection with those workshops and other activities to facilitate public participation in the regulatory process, Caltrans invites you to complete the following questionnaire. This information will greatly assist Caltrans as it begins the process of considering new regulations.

Please provide your responses following each question. Please feel free to forward this questionnaire to any other interested parties.

Please e-mail your responses to: Title.21.Changes@dot.ca.gov.

Please list the name of the person completing the questionnaire and the name of the agency or company you represent.

NAME **Rick Carrier**

AGENCY **Transportation Corridor Agencies (TCA)**

1. Are there any alternatives to the transition to 6C, including comparable Federal regulations or regulations/protocols in other states? Yes, there are several other protocols in use for tolling in the U.S. (E-ZPass, SeGo, ATA, and ASTM v6) but these do not offer the same combination of open competition and economies of scale. In addition the auto industry is moving towards incorporation of 5.9GHz in all vehicles, although that transition timeline is much longer and would not result in the potential cost savings identified by the California Toll Operators.

DEPARTMENT OF TRANSPORTATION



QUESTIONNAIRE

REGARDING TRANSITIONING FROM THE CURRENT TITLE-21 PROTOCOL TO A NEW PROTOCOL

PAGE 2**2. What are the benefits of the transition to 6C?**

- Continued use of open standard in California to promote competition.
- Inexpensive alternative to the current technology due to the economies of scale obtained through its broad use which extends outside of tolling to numerous applications.
- Wider choice of transponder form factors which include “sticker” tags and further reduce costs.

What are the drawbacks?

- The cost savings from a passive RFID technology does not require power in the transponder making the current customer feedback (beep) unavailable. The complexities and cost of including this functionality would eliminate the cost savings attained from the technology.
- Although technically feasible there have been no mass productions of a 3-setting (SOV, HOV and HOV+) 6C tag in the US. Only designs and prototypes have been demonstrated.

3. Please discuss the factors involved, including projected timetables, for transitioning to a new protocol, with respect to the following:

- a. Transponder procurements/existing inventories – TCA will adjust legacy Title-21 tag inventories and future 6C procurements to achieve a balance that fits the needs of our customers.
- b. Toll-system modifications – TCA’s roadside contractor is already developing a plan to incorporate 6C as the second protocol in our transponder readers. Back office integration requires minor modifications to the tag inventory system and modification of the transponder status files (the specifications for which have already been adopted by the CTOC technical committee). TCA will be ready for a 6C pilot program within a few months after Caltrans adopts the functional specifications and standards for 6C.
- c. Agency administrative changes – There are no anticipated changes to the way TCA manages its operations, customer service or interoperability with other California toll agencies.

DEPARTMENT OF TRANSPORTATION



QUESTIONNAIRE

REGARDING TRANSITIONING FROM THE CURRENT

TITLE-21 PROTOCOL TO A NEW PROTOCOL

PAGE 3

- d. Public education, outreach, and marketing – TCA will work with the other CTOC agencies to develop a coordinated education, outreach and marketing plan for 6C. This effort should be minor and only focus on the “new look” of transponders and options for customers to use transparent sticker tags.
- e. Issues regarding certification- TCA does not foresee any issues and looks forward to introducing this requirement for system providers in California. Independent 3rd party certification should increase operator confidence in products being procured and eliminate issues related to vendor interoperability amongst current suppliers.
- f. f. Issues regarding three-position transponders. – TCA currently provides three position transponders for our customers who use roads that require the HOV and HOV+ settings. When three position 6C tags become available, TCA will offer those tags to our customers. While this product may not be available in mass quantities immediately after adoption of 6C, the consumer demand and limited technical challenges in developing gives TCA confidence that they will be shortly thereafter.

4. Please describe how the transition:

- a. Impacts business and/or employees – Any cost reductions that can be realized through less expensive transponders, reduced tag storage space requirements and reductions in manual image review will have a positive effect in reducing TCA’s operating costs and enable the agency to provide better service at a reduced cost.
- b. Impacts small businesses – For those who elect to use sticker tags, reduced overhead from securing and managing transponder inventories could be realized.
- c. Impacts jobs or occupations – Expansion of the tolling market and current existence of 6C toll tag manufacturers in California could possibly provide some economic growth. No legacy Title-21 tags are currently manufactured in the state.
- d. imposes reporting requirements – No changes
- e. Impacts individuals. Introduction of 6C will provide an additional choice for TCA’s customers

5. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? No, the transition to 6C will likely provide additional opportunities for CA businesses. One of the largest 6C manufacturers is located in CA as noted above.

DEPARTMENT OF TRANSPORTATION



QUESTIONNAIRE

REGARDING TRANSITIONING FROM THE CURRENT

TITLE-21 PROTOCOL TO A NEW PROTOCOL

PAGE 4

6. **What are the costs that businesses and individuals may incur to comply with this regulation over its lifetime?** Transitioning to 6C should reduce capital and recurring costs for toll agencies and their customers through fewer or smaller toll rate increases.

7. **What are the fiscal impacts on state and local government?** Local government agencies that operate toll facilities in CA should realize capital and operating cost savings.

8. **Are there any issues regarding fairness of competition?** Legacy Title-21 technology has resulted in only two suppliers. Transitioning to 6C will increase competition and result in economies of scale.

9. **Are there any issues regarding individual privacy?** No, all aspects of existing legislation and practices for privacy by tolling agencies in California shall remain intact.

10. **Please provide comments on any other relevant issues not addressed above.**

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE